

Claims

What is claimed is:

1. A method for sealing a subterranean zone comprising:
preparing a sealing composition;
placing the sealing composition into the subterranean zone; and
heating the sealing composition to accelerate the setting of the sealing composition.
2. The method of claim 1 wherein the sealing composition comprises at least one sealant selected from the group consisting of cement, latex, and epoxy resin.
3. The method of claim 2 wherein the sealing composition is a cement slurry comprising cement and water.
4. The method of claim 3 wherein the cement is selected from the group consisting of pozzolan cement, gypsum cement, aluminous cement, silica cement, and alkaline cement.
5. The method of claim 4 wherein the cement is class G cement.
6. The method of claim 3 wherein the water is present in a range of 25-98 mass percent of the cement slurry.
7. The method of claim 2 wherein the sealing composition comprises a latex and the latex is selected from the group consisting of styrene butadiene copolymer latex, styrene butadiene acrylonitrile copolymer latex, vinyl acetate homopolymer latex, vinyl acetate acrylate copolymer latex, carboxylated styrene-butadiene copolymer latex, carboxylated acrylic copolymer latex and nitrile latex.

8. The method of claim 3 wherein the cement slurry further comprises resins and latexes.

9. The method of claim 2 wherein the sealing composition is an epoxy liquid comprising resin, associated hardener and inert filler material.

10. The method of claim 9 wherein the resin is a condensation product of epichlorohydrin and bisphenol A.

11. The method of claim 3 wherein the sealing composition further comprises an epoxy liquid comprising resin, associated hardener and inert filler material.

12. The method of claim 11 wherein the resin is a condensation product of epichlorohydrin and bisphenol A.

13. The method of claim 1 wherein a heating tool is lowered into the well bore to heat the sealing composition.

14. The method of claim 1, wherein the sealing composition is placed in the subterranean zone by pumping the sealing composition through a drill string and bit and further comprising circulating excess material out of the subterranean zone and removing the drill string and bit from the subterranean zone prior to heating the sealing composition.

15. A method of performing conformance operations in a subterranean zone comprising:

preparing a conformance composition for inhibiting the production of water;
placing the conformance composition into the subterranean zone adjacent a location of water production; and
heating the conformance composition to accelerate the setting or increase the viscosity of the conformance composition.

16. The method of claim 15 wherein the conformance composition comprises a conformance chemical selected from the group consisting of monomers, non-crosslinked polymers, resins, crosslinked polymers, fine-particle cement, conventional cement, silicates and MgO cement.
17. The method of claim 16 wherein the conformance composition comprises a conformance chemical monomer selected from the group consisting of acrylamide and hydroxy unsaturated carbonyl.
18. The method of claim 17 wherein the conformance chemical monomers are modified by at least one process selected from the group consisting of polymerization and crosslinking.
19. The method of claim 17 wherein the conformance chemical monomer is acrylamide and the acrylamide monomer is crosslinked by reaction with sodium persulfate.
20. The method of claim 17 wherein the conformance chemical monomer is hydroxy unsaturated carbonyl and the hydroxy unsaturated carbonyl monomer is crosslinked by reaction with alkali-metal sulfate.
21. The method of claim 16 wherein the conformance composition further comprises catalysts and activating agents.
22. The method of claim 15 wherein a heating tool is lowered into the well bore to heat the conformance composition.